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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,856	08/29/2001	Teruaki Okino	4641-59019	8541

7590 11/06/2003

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EXAMINER

NGUYEN, LAM S

ART UNIT	PAPER NUMBER
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2853

DATE MAILED: 11/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/942,856

Applicant(s)

OKINO, TERUAKI

Examiner

LAM S NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kasuga (US 5933212).

Kasuga discloses a method in a charged-particle-beam (CPB) microlithography method in which a device pattern, to be transferred onto a specific area of a sensitive substrate, is defined on a reticle that is subsequently illuminated with a charged-particle illumination beam to form a patterned beam that is directed at the sensitive substrate so as to imprint a corresponding region of the substrate with the pattern, a method for correcting errors in pattern elements, as imprinted on the substrate, caused by proximity effects, (column 1, line 5-15) the proximity-effect correction method comprising:

in performing a local resizing of a pattern element on the reticle, changing a linewidth of the pattern element, as defined on the reticle, by correspondingly changing an energy dose of an electron beam used to draw the pattern element on the reticle so as to change the linewidth from its initial design value (column 5, line 54 to column 6, line 4; column 8, line 12-31) (**Referring to claims 4, 6, 9, 10**).

Referring to claims 3, 5: in a design for a reticle pattern comprising pattern elements to be transferred to the substrate, calculating local-resizing corrections to profiles of the pattern

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elements, to be defined on the reticle, so as to configure the pattern-element profiles for correcting proximity effects that otherwise would be manifest on the pattern elements when projected onto the substrate; from the calculated corrections, obtaining corrected reticle pattern data; and forming the pattern elements on a reticle by drawing the pattern elements using an electron beam that is variably shaped as required to impart respective changes, according to the corrected reticle-pattern data, in a dose of the electron beam on the reticle, the changes in dose imparting corresponding changes in linewidths of the pattern elements, as defined on the reticle, sufficiently to reduce proximity effects acting on the pattern elements when the pattern is transferred to the substrate (column 6, line 59 to column 7, line 9).

Referring to claims 7, 8, 11, 12: a reticle is produced and used in microlithographically transferring the pattern, defined on the reticle, to a sensitive substrate using a charged particle beam (column 1, line 5-15: a reticle is expressed in term of a pattern and “microlithographically transferring the pattern” is expressed as illuminating an electron beam on a substrate for delineating a pattern).

Response to Arguments

Applicant's arguments with respect to claims 1-3, 5, 9-10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAM S NGUYEN whose telephone number is (703)305-3342. The examiner can normally be reached on 7:00AM - 3:30PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, STEPHEN D. MEIER can be reached on (703)308-4896. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9306 for regular communications and (703)305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

LN

October 28, 2003



HAI PHAM
PRIMARY EXAMINER